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ABSTRACT

This updated bibliography was prepared to provide a source of current information on general aspects of instructional computing, and to give particular attention to computing in mathematics education. The general information it contains will provide a starting point for educators who are beginning their work in instructional computing. The references to applications of computing in the mathematics curriculum provide information to beginners as well as to those with more advanced backgrounds. Efforts have been made to be selective, with the major criteria being how relevant the items appear in relation to the purposes of the guide and the currentness of the items. The guide is on a word-processing system, and will be updated and revised semiannually. Section 1 contains sources of hardware, software, and other information. Section 2 contains the bibliographical references, categorized by instructional computing, computer literacy, computer science, management of computer resources, and research summaries. (MNS)

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GUIDE TO RESOURCES IN INSTRUCTIONAL COMPUTING

Prepared by

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Revised by

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INTRODUCTION

This Guide to Resources in Instructional Computing has been prepared to provide a source of current information on general aspects of instructional computing, and to give particular attention to computing in mathematics education. The general information it contains will provide a starting point for educators who are beginning their work in instructional computing. The references to applications of computing in the mathematics curriculum provide information to beginners as well as to those with more advanced backgrounds.

Although the number of topics included in this guide is fairly large, efforts have been made to be selective in choosing the specific entries. The entries are, with few exceptions, limited to those that pertain to microcomputers. The major criteria applied in selecting entries were how relevant the items appeared in relation to the purposes of the guide and the currentness of the items. Since a product such as this quickly becomes outdated, the guide has been entered into the word processing system at NCTM Headquarters in Reston and it will be updated and revised semiannually. (Anyone who wishes to contribute information to be added to a revised version of this guide should contact Judy Adams, 114, South Fillmore, Laramie, WY 82070.)

Thanks are due to Mary Kay Corbitt, University of Kansas, for preparing the original edition of this guide. Without her efforts, this guide would not have been written.

We welcome your comments and suggestions on this guide and we sincerely hope that it provides useful information.

Judy Adams
Technology Advisory Committee

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SECTION 1: GETTING STARTED IN INSTRUCTIONAL COMPUTING

The resources in this section are intended to help educators get started in computing by providing information on hardware manufacturers, software vendors and publishers, sources of funding, organizations, and journals related to instructional computing.

1.1. Sources of Hardware

This section lists the manufacturers of microcomputers found most frequently in schools. Write directly to the manufacturer for information on the particular model or models of computers produced, software, and other resources available from the manufacturer.

Apple Computer Inc., 20525 Mariani Avenue, Cupertino, CA 95014
Atari Computer Division, 1312 Crossman, Sunnyvale, CA 94086
Commodore Business Machines Inc., 681 Moore Road, King of Prussia, PA 19406
Digital Equipment Corp., Box 1003, 2 Iron Way, Marlboro, MA 01752
I.B.M., P.O. Box 1328, Boca Raton, FL 33432
Ohio Scientific, 1333 South Chillicothe Road, Aurora, OH 44202
Radio Shack, 1300 One Tandy Center, Fort Worth, TX 76102
Texas Instruments Inc., P.O. Box 53, Lubbock, TX 79408

1.2 Sources of Educational Software

One immediate source of information about software for your brand of computer is to write directly to the manufacturer of the computer. A software directory is also a good source of information on software available from different manufacturers and vendors. Listed are a few major directories that include software from several vendors and/or for different brands of microcomputers. Also included are sources of free educational software catalogs.

1.2.1. Software Directories

Write to publisher for price information.

The Apple Software Directory, Vol. Three: Education, WIDL Video, 5245 West Diversity Ave., Chicago, IL 60639
The Book of Apple Software (1983 Edition), The Book Company, 11223 S. Hindry Avenue, Los Angeles, CA 90045
The Book of Atari Software, 1983, 11223 S. Hindry Avenue, Los Angeles, CA 90045
Commodore Software Encyclopedia, Commodore Business Machines, System Marketing Group, 681 Moore Road, King of Prussia, PA 19406
Educator's Handbook and Software Directory, Vital Information, Inc., 6720 W. 66th Terrace, Overland Park, KS 66202
Instructor Computer Directory, "Fall 83 Computer Directory for Schools." Instructor, 757 Third Avenue, New York, NY 10017
International Microcomputer Software Directory, Imprint Software, 420 South Howes St., Fort Collins, CO 80521
1982 Swift's Directory of Educational Software, Apple II Edition, Sterling Swift Publishing Co., 1600 Fortview Road, Austin, TX 78704

Queue, 5 Chapel Hill Drive, Fairfield, CT 06432
Reference Manual for Instructional Use of Microcomputers, JEM Research,
Discovery Park, University of Victoria, P.O. Box 1700, Victoria, BC V8W 2Y2
School Microware Directory, Dresden Associates, P.O. Box 246, Dresden, ME
04342
Skarbek Software Directory, 11990 Dorsett Road, St. Louis, MO 63043
Sources for Courses, TALMIS, 115 N. Oak Ave., Oak Park, IL 60301
The TRS-80 Sourcebook and Software Directory, available at Radio Shack stores
VMI Apple II Blue Book, Visual Materials Inc., 4170 Grove Avenue, Gurnee, IL
60031

1.2.2. Free Software Catalogs

These catalogs list software from more than one vendor and/or for more than one brand of computer. Write and ask for free copy of microcomputer software catalog.

Appleseed, Software Publications, 6 South Street, Milford, NH 03055
The Cambridge Development Laboratory, 36 Pleasant Street, Watertown,
MA 02172
Creative Computing, 39 E. Hanover Avenue, Morris Plains, NJ 07950
Creative Publications, P.O. Box 10328, Palo Alto, CA 94303
Educational Activities, P.O. Box 87, Baldwin, NY 11510
Educational Computing Catalog, Huntington Computing, P.O. Box 1297,
Corcoran, CA 93212
Encyclopedia Britannica Educational Corporation, 425 N. Michigan Avenue,
Chicago, IL 60611
Hayden Book Company, 50 Essex Street, Rochelle Park, NJ 07662
K-12 MicroMedia, P.O. Box 17, Valley Cottage, NY 10989
MARCK, 280 Linden Drive, Branford, CT 06082
The Micro Center, P.O. Box 6, Pleasantville, NY 10570
Micro Learningware, P.O. Box 2134, N. Mankato, MN 56001
Microdynamics Educational Systems, Inc., 2360 S.W. 179th, Beaverton, OR
97005
Opportunities for Learning, Dept. L-4, 8950 Lurline Avenue, Chatsworth, CA
91311
Random House School Division, 400 Hahn Road, Westminster, MD 21157
Scholastic Inc., 904 Sylvan Avenue, Englewood Cliffs, NJ 07632
Society for Visual Education, Department VB, 1345 Diversey Parkway,
Chicago, IL 60614
Sunburst Computer Catalog, Rm. Y B, 39 Washington Avenue, Pleasantville,
NY 10570

1.2.3. Vendors and Publishers

Educational Software Vendors. There are at least 500 vendors of educational software in existence. For partial listings, see:

"Directory of Educational Computing Resources," Classroom Computer Learning, (Fall 1983/84). Pitman Learning, 19 Davis Drive, Belmont, CA 94002

"Educational Software Vendors," Classroom Computer News, 1(July/August 1981): 28-32.

"How to Find Good Software," Electronic Learning, 2(October 1982): 40-43.

"Software Directory," Electronic Learning, 1(May/June 1982): 1A-10A.

Publishing Companies. Many of the major publishing companies are now marketing educational software. See your local representative or write directly to the publisher for further information. A list of such publishers and their addresses may be found in:

Classroom Computer News, 1(July/August 1981): 37.

1.2.4. Reviews of Instructional Software

Many journals publish reviews of software in each issue. See:

AEDS Monitor, Arithmetic Teacher, Classroom Computer News, Computing Teacher, Creative Computing, Educational Computer, Educational Technology, Electronic Learning, Mathematics Teacher, and School Science and Mathematics.

See also:

Ann Lathrop, "Micomputer Software for Instructional Use: Where Are the Critical Reviews?" Computing Teacher, 9(February 1982): 22-26.

"The Software Yellow Pages," Electronic Learning, 2(October 1982): 56-59.

The MicroSIFT project (Microcomputer Software and Information for Teachers) operates as a national clearinghouse for educational software. In addition to publishing teachers' reviews of software, MicroSIFT provides a means for teachers to test software in their classrooms. Write for further information and ask to be placed on mailing list for MicroSIFT News: MicroSIFT, Northwest Regional Educational Laboratory, 500 Lindsay Building, 710 S.W. Second Avenue, Portland, OR 97204. (See Electronic Learning, October 1982, p. 58, for list of reviews available from MicroSIFT.)

For information on commercial software review journals, write:

Courseware Report Card, 150 W. Carob St., Compton, CA 90220
The Digest of Software Reviews, School and Home CourseWare Inc.,
1341 Bulldog Lane, Suite C, Fresno, CA 93710
EPIE/Consumer Union Software Reviews, EPIE Institute, P.O. Box 620,
Stonybrook, NY 11790
Journal of Courseware Review, The Apple Education Foundation, 20525
Mariani Ave., Cupertino, CA 95014
School Microware Reviews, Dresden Associates, Box 246, Dresden,
ME 04342
TALMIS Courseware Ratings, 115 N. Oak Park Ave., Oak Park, IL 60301

Software exchanges also provide a means for sharing information and programs. For information on one such exchange, see "SOFTSWAP," by Ann Lathrop, in the Computing Teacher, 9(April 1982): 16-31, and 10(April 1983): 20-30, or else write to SOFTSWAP, San Mateo County Office of Education, 333 Main Street, Redwood City, CA 94063.

1.3. Information Groups and Resource Centers for Educators

Many users groups exist for the purpose of sharing information about instructional computing. Your local computer dealer can supply information on groups in your area, or you can write to the manufacturer of your computer for

information. (See also the 1983 Classroom Computer News Directory of Educational Computing Resources, published by Intentional Educations, Inc.)

A listing of state-wide user's groups may be found in Electronic Learning, 2(November/December 1982): 62-71.

The following is a selected list of different types of information groups and resource centers, and is intended to be illustrative, not exhaustive. Many different types of activities and different types of organizations are represented on the list. Write for further information and/or ask to be placed on the mailing list.

Boston Computer Society, Educational Resource Exchange, Three Center Plaza, Boston, MA 02108
ComputerTown USA!, People's Computer Company, P.O. Box E, Menlo Park, CA 94025
Computer-Using Educators (CUE), c/o Walt Ettlin, Alhambra High School, 150 E Street, Martinez, CA 94553
Conduit, P.O. Box 388., Iowa City, IA 52244
Math and Computer Education Project, Lawrence Hall of Science, University of California--Berkeley, Berkeley, CA 94720
Michigan Association for Computer Users in Learning (MACUL), c/o Lary R. Smith, Wayne County Intermediate School District, 33500 Van Born Road, Wayne, MI 48184
Microcomputer Center, San Mateo County Office of Education, 333 Main Street Redwood City, CA 94063
Microcomputer Resource Center, Teachers' College, Columbia University, New York, NY 10027
Microcomputers in Education, Payne 203, Arizona State University, Tempe, AZ 85287
Minnesota Educational Computing Consortium (MECC), 2520 Broadway, St. Paul, MN 55113
Northwest Council for Computers in Education, Computer Center, Eastern Oregon State College, La Grande, OR 97850
Project BEST (Basic Educational Skills through Technology), Association for Educational Communications and Technology, 1126 Sixteenth St., N.W., Washington, DC 20036
TABS Project, Arps Hall 202-A, 1945 North High Street, Columbus, OH 43210
Technical Education Research Center (TERC), 8 Eliot Street, Cambridge, MA 02138
Texas Computer Education Association, c/o Vicki Smith, 7131 Midbury, Dallas, TX 75230

1.4. Professional Organizations

Association for Computers in Mathematics and Science Teaching, P.O. Box 4455, Austin, TX 78765

This organization, whose members are college and precollege mathematics and science teachers, publishes the Journal of Computers in Mathematics and Science Teaching.

Association for Educational Communications and Technology (AECT), 1126 Sixteenth Street, NW, Washington, DC 20036

AECT is concerned with the use of technology in education. Project BEST is an AECT project.

Association for Computing Machinery (ACM), 1133 Avenue of the Americas, New York, NY 10036

ACM is an organization of professionals involved in many different aspects of computer science. Of particular interest to educators are the ACM Special Interest Groups: Computer Uses in Education (SIGCUE) and Computer Science Education (SIGCSE).

Association for the Development of Computer-Based Instructional Systems (ADCIS), Bond Hall, Western Washington University Computer Center, Bellingham, WA 98222

ADCIS is concerned with computer-based instruction. Publications include The Journal of Computer-Based Instruction.

Association for Educational Data Systems (AEDS), 1201 16th St., N.W., Washington, D.C. 20036

AEDS is concerned with both educational and data processing applications of computers. AEDS publishes the AEDS Bulletin, AEDS Monitor, and AEDS Journal.

International Council for Computers in Education (ICCE), Department of Computer and Information Science, University of Oregon, Eugene, OR 97403

ICCE is an organization of individuals and institutions that are concerned with instructional uses of computers at the precollege level. ICCE publishes The Computing Teacher.

National Consortium on Uses of Computers in Mathematical Sciences Education (CIMSE), c/o Ron Wenger, 016 Memorial Hall, University of Delaware, Newark, DE 19711

CISME is an ADCIS affiliate whose members are mathematics educators at the secondary and college levels. Write for information.

1.5. Journals

Write directly to the publishers for information or subscription costs.

Journals for Educators

These journals are nontechnical, and are appropriate for beginners in instructional computing as well as non-beginners.

Arithmetic Teacher (9 issues annually): National Council of Teachers of Mathematics, 1906 Association Drive, Reston, VA 22091

Classroom Computer Learning (9 issues annually): Classroom Computer, 5617 West Cermak Road, Cicero, IL 60650

The Computing Teacher (9 issues annually): Department of Computer & Information Science, University of Oregon, Eugene, OR 97403

Educational Computer Magazine (Bimonthly): Educational Computer, P.O. Box 535, Cupertino, CA 95015
Educational Technology (Monthly): 140 Sylvan Avenue, Englewood Cliffs, NJ 07632
Electronic Education: Suite 220, 1311 Executive Center Drive, Tallahassee, FL 32301
Electronic Learning (8 issues annually): Scholastic Inc., 902 Sylvan Avenue, Englewood Cliffs, NJ 07632
Instructor, P.O. Box 6099, Duluth, MN 55806
The Journal of Computers in Mathematics and Science Teaching (Quarterly): P.O. Box 4455, Austin, TX 78765
Mathematics Teacher (9 issues annually): National Council of Teachers of Mathematics, 1906 Association Drive, Reston, VA 22091
The Scholastic Microzine, 902 Sylvan Avenue, Englewood Cliffs, NJ 07632 (a magazine on disk)
School Courseware Journal (5 issues annually; includes disk or cassette): 1341 Bulldog Lane, Suite C, Fresno, CA 93710
School Science and Mathematics, School Science and Mathematics Association, 126 Life Sciences Building, Bowling Green State University, Bowling Green, OH 43403
Teaching and Computers: Scholastic Inc., 730 Broadway, New York, NY 10003
T.H.E. JOURNAL, P.O. Box 992, Acton, MA 01720

General Computing Journals

These journals are somewhat more technical, and are not exclusively for educators, although occasional articles or special issues relate to instructional computing.

Byte (Monthly): 70 Main Street, Petersborough, NH 03458
Compute!, 515 Abbott, Broomall, PA 19008
Creative Computing (Monthly): P.O. Box 789-M, Morristown, NJ 07960
InfoWorld (News weekly): 375 Cochituate Road, Box 880, Framingham, MA 01701
Personal Computing, P.O. Box 1408, Riverton, NJ 08077
Popular Computing (formerly On Computing - Monthly): 70 Main Street, Peterborough, NH 03458
Softalk, Softalk Publishing, Inc., Box 60, North Hollywood, CA 91603
TRS-80 Microcomputer News, Tandy Corporation, Fort Worth, TX 76102

1.6. Sources of Funding

Obtaining funds to purchase microcomputers may be a problem for many school districts, but there are potential sources of funds at federal, state, and local levels.

See also:

Andrew Calkins, "Where the Money Is: A Guide to Funding for 1982-83." Electronic Learning, 1(May/June 1982): 24-26.
 James H. Stronge, "Funding Computer Related Technology in the Public Schools." Computing Teacher, 11(August 1983): 13-14.
 "Shared Energy Savings: Acquiring Microcomputers through Creative Financing." Electronic Learning, 2(March 1983): 36-38.

Federal

A good source of information about federal programs that may provide money for microcomputers is The A-V Connection: Guide to Federal Funds for Audio-Visual Users, National Audio-Visual Association, 3150 Spring Street, Fairfax, VA 22031.

State

At state levels, new guidelines being developed to cover dissemination of block grants may provide information on possible sources of funds. Contact your state education agency for further information.

Private Foundations

Many foundations provide funds for purchasing equipment. Obtain a foundation directory from your local library for further information.

Manufacturers

Some of the major computer manufacturers offer grants of hardware to schools. For further information on grant proposals write:

Apple: Foundation for the Advancement of Computer-Aided Education
20863 Stevens Creek Boulevard, Cupertino, CA 95014
Atari: Atari Institute for Educational Action Research, 1196 Borregas
Avenue, Sunnyvale, CA 94086
Radio Shack: Tandy TRS-80 Educational Grants Program, Radio Shack
Education Division, 400 Tandy Atrium, Fort Worth, TX 76102

1.7 Information Retrieval Services/Databases

Access to different types of information from varied sources (e.g., news, bibliographic information, statistical services, etc.) is possible through computer-based information retrieval services. Many such databases exist; a few that are particularly relevant for educators are listed below. Write for specific information.

A guide to such sources is the Directory of Online Information Resources, available from CGS Press, 11301 Rockville Pike, Kensington, MD 20895
CompuServe Information Service, 5000 Arlington Centre Boulevard, Columbus, OH 43220
Datanpan, c/o Karl Zinn, Center for Research on Learning and Training, 109 E. Madison Street, Ann Arbor, MI 48104
Education News and Information Network, National School Public Relations Association, 1801 N. Moore Street, Arlington, VA 22209 (available through The Source)
ERIC, Educational Resources Center, National Institute of Education, Washington, DC 20208
RICE (Resources in Computer Education), BRS, Inc., 1200 Route 7, Latham, NY 12110
The Source, Reader's Digest, Educational Division, Pleasantville, NY 10570
Technology Information for Educators (TIE), West Laboratory for Educational Research and Development, 1855 Folsom Street, San Francisco, CA 94103

SECTION 2: BIBLIOGRAPHY

This section of the guide contains recent books and journal articles that address a number of topics in instructional computing, with emphasis on computing in mathematics education. Refer to the table of contents for the organizational structure of these references.

2.1. Instructional Computing2.1.1. General Information on Instructional Computing2.1.1.1. Books

Coburn, Peter, Peter Kelman, Nancy Roberts, Tom Snyder, Dan Watt, and Cheryl Weiner. Practical Guide to Computers in Education. Reading, MA: Addison-Wesley, 1982.

Graham, Neil. Artificial Intelligence. Franklin, PA: Tab Books.

Harper, Dennis O., and James H. Stewart. RUN: Computer Education. Belmont, CA: Brooks/Cole, 1983.

Kepner, Henry S. (Ed.). Computers in the Classroom. Washington, DC: National Education Association, 1982.

Minnesota Educational Computing Consortium. Using the Computer in the Classroom. St. Paul, MN: MECC, 1982.

Moursund, David. Introduction to Computers in Education for Elementary and Middle School Teachers. Eugene, OR: International Council for Computers in Education, 1981.

Moursund, David. Teacher's Guide to Computers in the Elementary School. La Grande, OR: International Council for Computers in Education, 1980.

Mowe, Richard. The Academic Apple. Reston, VA: Reston Publishing.

Naiman, Addine. Microcomputers in Education: An Introduction. Cambridge, MA: Technical Education Research Centers, 1982.

Ouverson, Marlin. Computer Anatomy for Beginners. Rockville, MD: Computer Town, 1983.

Papert, Seymour. Mindstorms: Children, Computers, and Powerful Ideas. New York: Basic Books, 1980.

Poirot, James L. Computers and Education. Manchaca, TX: Sterling Swift, 1980.

Richman, Ellen. Spotlight on Computer Literacy. Westminster, MD: Random House, Inc., 1982.

Rogers, Jean B. An Introduction to Computers and Computing. Eugene, OR: International Council for Computers in Education, 1981.

Taylor, Robert (Ed.). The Computer in the School: Tutor, Tool, Tutee. New York: Teachers College Press, 1980.

Thomas, James L. (Ed.). Microcomputers in the Schools. Phoenix, AZ: Oryx Press, 1982.

Watson, Nancy (Ed.). Microcomputers in Education: Getting Started and Microcomputers in Education: Uses for the 80's. Tempe, AZ: Arizona State University, 1981, 1982.

Willis, Jerry, Paul Dixon, and D. Lamon Johnson. Computers, Teaching and Learning. Beaverton, OH: Dilithium Press, 1983.

Zalewski, Donald W (Ed.). Microcomputers for Teachers. Bowling Green, OH: School Science and Mathematics Association, 1982.

2.1.1.2. Journal Articles

Aiken, R.M., and L. Braun. "Into the 80's with Microcomputer-Based Learning." Computer, 1980, 13(7): 11-16.

Bitter, Gary G. "Understanding the Potential of Microcomputer Uses in Education." Educational Computer. 2(2): 14.

Bjorum, William. "A Plan for Introducing Microcomputers into Instruction." Computing Teacher, 9(March 1982): 52-53.

Bjorum, William. "Introducing Microcomputers to Instructional Education." Computing Teacher, 1980-81, 8(5): 39-49.

Braun, Ludwig. "Computers in the Learning Environments: An Imperative for the 1980s." Byte, 5(July 1980): 7-10, 108-144.

Caravella, Joseph R. "Coping with the Challenge of Change." Arithmetic Teacher, 30(February 1983): 50.

Carter, Ricky. "Schooldays 1991: A Vision of Student Life in the Next Decade." Classroom Computer News, 2(January/February 1982): 17-19, 27.

Chambers, J. A., and Alfred Bork. "Computer Assisted Learning in U.S. Secondary/Elementary Schools." Computing Teacher, 1980-81, 8(1): 50-51.

Charp, Sylvia. "Effectiveness of Computers in Instruction." Viewpoints in Teaching and Learning (Journal of the School of Education, Indiana University), 57(Spring 1981): 13-22.

Cooper, Richard P. "What Do You Do With A New Computer?" Arithmetic Teacher, 30(October 1982): 46-47.

Filliman, Paula K. "Guidelines for Introducing Microcomputers in the Schools." Arithmetic Teacher, 30(February 1983): 16-17, 56.

Forman, Denyse. "Search of the Literature." Computing Teacher, 9(January 1982): 37-51.

Gleason, Gerald T. "Microcomputers in Education: The State of the Art." Educational Technology, 21(March 1981): 7-18.

Gress, Eileen K. "The Future of Computer Education: Invincible Innovation or Transitory Transformation." Computing Teacher, 9(September 1981): 39-42.

Hill, Shirley A. "The Microcomputer in the Instructional Program." Arithmetic Teacher, 30(February 1983): 14-15, 54.

"Information Technology and Its Impact on American Education" (Summary Report). Computing Teacher, 10(January 1983): 18-29.

Isaacson, Dan. "What's Holding Back Computer Use in Education?" Classroom Computer News, 1(May/June 1981): 1, 28-29.

Kelman, Peter. "What if They Gave A Computer Revolution and Nobody Came?" Classroom Computer News, 2(January/February 1982): 10, 54.

Mowe, Richard. "Computers & Teaching = COMPUTEACH." Computing Teacher, 9(April 1982): 42-50.

Roecks, Alan L. "How Many Ways Can the Computer be Used in Education? A Baker's Dozen." Educational Technology, 21(September 1981): 16.

Schultz, Karen A., and Lynn C. Hart. "Computers in Education." Arithmetic Teacher, 31(December 1983): 36-37.

Spencer, Mima, and Linda Baskin. "Classroom Computers: Do They Make a Difference?" Classroom Computer News, 2(November/December 1981): 12-15.

Stein, Gloria. "Some Notes on Getting Started." Classroom Computer News, 2(January/February 1982): 21-22, 56.

Sullivan, Tom (Ed.). "General News and Information for the Elementary Grades." Computing Teacher, 1980-81, 8(5): 59-61.

Tallant, Dale M. "A Computer in the Classroom." Computing Teacher, 9(December 1981): 11-13.

Watts, Norman. "A Dozen Uses for the Computer in Education." Educational Technology, 21(April 1981): 18-22.

"The Year in Review: A Look Ahead." Electronic Learning, 2(May/June 1983): 41-57.

2.1.1.3. Special Issues of Journals

These special issues were devoted to the use of computers in education, or contained special features of interest to educators.

Arithmetic Teacher, 30(February 1983).

Byte, 6(September 1981); 7(August 1982).

Classroom Computer News, 1(July/August 1981). A "Compendium" of information; 1983 Directory of Educational Computing Resources.

Creative Computing, 6(September 1980); 7(March 1981);
 7(September 1981); 7(October 1981); 8(October 1982).
Instructional Innovator, 25(September 1980).
Learning, 10(January 1982).
Mathematics Teacher, 74(November 1981).
Microcomputing, (September 1981).
Phi Delta Kappan, 63(January 1982).
Phi Delta Kappan, 65(October 1983).
T.H.E. Journal, 10(January 1983).
Today's Education, 71(April/May 1982).

2.1.1.4. Bibliographies (General)

"A Bibliography of Bibliographies," Classroom Computer News, 1(July/August 1981): 52.

Albrecht, Bob, and George Firedrake. "Dragon Smoke." Computing Teacher, 1980-81, 8(7): 42-43.

Kosel, Marge. "Computer Bibliography." Mathematics Teacher, 74(November 1981): 658-659.

Rambally, Gerald. "Brief Bibliography of Educational Computing Newsletters and Journals." Computing Teacher, 1980-81, 8(6): 10-11.

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Burton, John, et al. Computers in Teaching Mathematics. Addison-Wesley, 1982.

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Computing Teacher features a monthly column "The Logo Center" that began in January 1983.

The following associations publish newsletters and/or journals that focus on Logo:

The National Logo Exchange, Attn: Carol Thresher, Box 5341, Charlottesville, VA 22905

Young People's Logo Association (YPLA), James H. Muller, Editor and Publisher, 1208 Hillside Drive, Richardson, TX 75081

The Logo and Educational Computing Journal, Suite 219, 1320 Stony Brook Road, Stony Brook, NY 11790

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